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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/840,569	04/23/2001	Timothy M. Moore	206190	2994
23460	7590	07/27/2004	EXAMINER	
LEYDIG VOIT & MAYER, LTD TWO PRUDENTIAL PLAZA, SUITE 4900 180 NORTH STETSON AVENUE CHICAGO, IL 60601-6780			LIN, WEN TAI	
			ART UNIT	PAPER NUMBER
			2154	

DATE MAILED: 07/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/840,569	Applicant(s) MOORE ET AL.	
	Examiner Wen-Tai Lin	Art Unit 2154	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 April 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1/22/02, 5/12/04</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-21 are presented for examination.
2. The Oath is found to be defective because application number 09/557,497, which is designated as a CIP parent, was entered as a prior provisional application claiming benefit under USC 119(e). Correction of the oath is required in response to this office action.
3. Claims 1-8 are objected to because of the following informalities:
the word "service" should be "method" or "process". See MPEP §2106. Correction is required in response to this office action.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:
 - a. Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.
5. Claims 9-12 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Specifically, the claims are directed toward a data structure per se. Such claimed data structures do not define any structure and

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functional interrelationships between the data structure and the computer software and hardware components which permit the data structure's functionalities to be realized (see MPEM §2106).

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-2, 5, 7-8, 13-14, 17 and 20-21 are rejected under 35 U.S.C. 102(e) as being anticipated by MATSUDA et al.[U.S. PGPub 20020133573].

8. As to claims 1-2, A service provided to an application running on a computing device [e.g., an NOA device as described in paragraph 36], the service comprising discovering logical networks to which the computing device is connected [paragraph 34], naming the logical networks in a manner that provides a mapping between names given to the logical networks and the logical networks [paragraph 38], and correlating the names given to logical networks with network interfaces on the computing device

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through which the logical networks may be accessed [col.10, claims 2-5; paragraph 64; note that medium access control (MAC) serves as an interface between the computing device and an Ethernet-based LAN], wherein the mapping between names given to the logical networks and the logical networks is a one-to-one mapping.

9. As to claim 5, MATSUDA further teaches that the service further comprising determining a connectivity type for a logical network [col.10, claim 5; paragraph 64; e.g., determining what topology is implemented].

10. As to claim 7, MATSUDA further teaches that the further comprising determining whether a logical network has connectivity to the Internet [paragraph 40].

11. As to claims 8, 13-14, 17 and 20-21, since the features of these claims can also be found in claims 1, 5 and 7, they are rejected for the same reasons set forth in the rejection of claims 1, 5 and 7 above.

12. Claim 9 is rejected under 35 U.S.C. 102(e) as being anticipated by Pulsipher et al. [U.S. Pat. No. 5948055].

13. As to claim 9, Pulsipher teaches the invention as claimed including: a network monitoring system/method utilizing a data structure, the data structure comprising:

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a first data field containing data representing a name of a logical network to which a computing device is connected [col.10, lines 13-21]; and
a second data field containing data representing a globally unique identifier of an interface on the computing device through which the logical network is accessible [col.10, lines 22-24].

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claims 3-4, 6, 15-16 and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over MATSUDA et al.(hereafter "MATSUDA")[U.S. PGPub 20020133573], as applied to claims 1-2, 5, 7-8, 13-14, 17 and 20-21 above.

16. As to claim 3, MATSUDA further teaches that the names given to logical networks are initially suggested by a user [702, Fig.7; paragraph 65].

MATSUDA does not specifically teach that the names could be derived from DNS domain names, subnet addresses, or 802.1X network identity strings. However, it

is well known in the art to name an object based on its associated characteristics for ease of correlating the object's functionalities to its name.

Since the DNS domain names, subnet addresses, or 802.1X network identity strings are explicit information associated with a network, it is obvious to one of ordinary skill in the art that MATSUDA's NOA clients could have derived the proposed network name based on the aforementioned known information because a naming convention as such would result in easy-to-identify network names and may also potentially reduce conflict with the existing names in use.

17. As to claim 4, MATSUDA teaches that NOA devices resolve the conflict using a novel conflict resolution process which makes the selected network names unique consistent [paragraph 38] and perform information update in response to changes in the network environment (e.g., a change in IP address) [paragraphs 63-64].

MATSUDA does not specifically teach correlating the names given to logical networks with application programming interfaces of transport protocols supported by the logical networks and providing to the application information about connections to the logical networks, and notifying the application when information reported to it changes.

However, it is well known in the art that APIs are subroutines written for just about every type of software program (e.g., operating systems, utility programs and communication protocol handling) that needs to communicate with external programs.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used API to develop MATSUDA's NOA applications because API is a standard programming technique making it easier for programmers to develop applications.

18. As to claim 6, MATSUDA does not specifically teach that the connectivity type can be categorized as managed, unmanaged, ad hoc or unknown.

However, in the same field of endeavor, Pulsipher teaches that the status of a network object (such as a computer, a network subnet, or a segment) may be identified as managed, unmanaged or unknown [col.32, lines 41-47; col.22, lines 37-50]. As to the "ad hoc" status (which means a standalone network), it is obvious that MATSUDA and/or Pulsipher's services could also be applied to a network that is not connected to any other network.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the similar categorization of network in MATSUDA's system because by doing so it would facilitate MATSUDA's network names and addresses management.

19. As to claims 15-16 and 18-19, since the features of these claims can also be found in claims 1, 4-6 and 13-14, they are rejected for the same reasons set forth in the rejection of claims 1, 4-6 and 13-14 above.

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20. Claims 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pulsipher et al.(hereafter "Pulsipher")[U.S. Pat. No. 5948055], as applied to claim 9 above.

21. As to claims 10-12, Pulsipher does not specifically teach that the data structure further comprising:

a third data field containing data representing the type of connection from the computing device to the logical network; and a fourth data field containing data representing the speed of the connection from the computing device to the logical network.

However, Pulsipher teaches that topology data represents the devices and inter connections of the network and can be used to display various conceptual views of the network at a management station [Pulsipher: abstract] and the connectivity type, including whether computing device has connectivity to the Internet via a underlying network is part of Pulsipher's topology data [e.g., gateway is one of the network objects interconnecting two different networks].

It would have been obvious to one of the ordinary skill in the art to have constructed a data structure incorporating the type of connectivity between a node interface to a network, wherein the speed of connection is also implicitly or explicitly presented [e.g., ATM, T1, etc. are objects which also contains speed/bandwidth implications] because such additional information would facilitate Pulsipher's

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management algorithms for handling overlap in monitored regions through the choice of a primary station for each object monitored.

22. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Jacoby [U.S. Pat. No. 5768552]; and

Baker et al. [U.S. Pat. No. 5570366].

23. A shortened statutory period for response to this action is set to expire 3 (three) months and 0 days from the mail date of this letter. Failure to respond within the period for response will result in ABANDONMENT of the application (see 35 U.S.C. 133, M.P.E.P. 710.02, 710.02(b)).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wen-Tai Lin whose telephone number is (703)305-4875. The examiner can normally be reached on Monday-Friday (8:00-5:00) .

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on (703)305-8498. The fax phone numbers for the organization where this application or proceeding is assigned are as follows:

(703)872-9306 for official communications; and

(703)746-5516 for status inquires draft communication.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.

Wen-Tai Lin

July 21, 2004

A handwritten signature in black ink, appearing to read "Wen-Tai Lin". The signature is fluid and cursive, with the first name "Wen" and last name "Lin" clearly distinguishable.